

REMARKS

Upon entry of the present proposed Amendment, the claims in the application are claims 14-16, 19, 20, 27, 30-33 and 36-57, of which claims 14, 19, 20, 49, 54 and 57 are independent, and of which claims 14-16, 19 and 36 have been withdrawn from consideration by the Examiner as directed to a non-elected invention.

In the above amendments, claim 20 is amended to further specify that paint finished surface of the automobile having the strippable paint (protective coating) applied thereto is an exterior surface, that the inspecting step is a final inspection of the completely manufactured vehicle, and that the applied strippable paint remains on the automobile through at least the assembling step and the final inspection step (a similar feature was formerly presented in claim 45); while claim 45 is amended to be consistent with the amendments to claim 20.

New claims 49-57 are being submitted to focus on differences between the invention and the prior art, subject matter that was discussed with Examiner Jimenez during the interview of record which took place on February 4, 2005.

Applicant respectfully submits that the proposed amendments are fully supported by the original disclosure, including the drawings and the discussion at page 25, line 14- page 26, line 12 of the original specification. Applicant also respectfully submits that no new matter is introduced into the application by the above amendments.

Applicant respectfully submits that each of the present claims complies with the requirements of 35 USC 112, and is patentably distinct over the references of record based on the arguments presented in the Amendment of 12 December 2003, and on the following arguments which relate to rejections of claims 20 and 45 under 35 USC 103(a) set forth in the Office Action

of 12 September 2003.

35 USC 103(a) Issues

Again, in the Office Action of 12 September 2003, the Examiner presented the following rejections under 35 USC 103(a) relative to claims 20 and 45.

1. Claims 20, 27, 30-33, 37-40 and 43-46 are rejected under 35 USC '103(a) as being unpatentable over US Patent 5,186,978 to Woodhall et al. in view of US Patent 4,727,232 to Omori et al, and vice versa.
2. Claim 45 is rejected under 35 USC '103(a) as being unpatentable over Woodhall '978 in view of Omori, and Grogan US Patent 5,143,949.

The Examiner's took the position that: Woodhall's disclosure encompasses mechanical assembly line operations including the mounting of an engine and functional parts to the automobile; and that in the proposed combination of the Woodhall and Omori references; it would have been obvious to one of ordinary skill in the art at the time of the invention to coat the automobile with a peelable paint after it has been painted with a finish (permanent) paint in order to protect the vehicle from damage during subsequent mechanical operations performed on the product as taught by Woodhall. The Examiner further maintained that it would have also been obvious to one of ordinary skill in the art at the time of the invention to further modify the hypothetical combination of Woodhall and Omori by leaving the protective peelable coating on during inspecting and shipping since to do so is old and known in the art for the purpose of protecting against damage as taught by Grogan.

Applicant's Further Response

Upon careful consideration of the Examiner's rejections and the disclosures of the applied references, applicant further respectfully traverses the rejections of claims 20 and 45 because none of the references actually disclose or suggest the features of applying a strippable coating to an automobile's paint finished surface during assembly of the automobile, and then maintaining the strippable coating on the automobile through completion of the vehicle assembly (including mounting of an engine and functional parts), a finished vehicle inspection and shipping of the manufactured vehicle, such that any hypothetical combination of the actual reference teachings does not achieve or make obvious the claimed invention, whereas such features provide very significant advantage not achieved or suggested by the references.

While Woodhall's masking material is generally disclosed for use during fabrication of a vehicle on an assembly line, Woodhall's merely indicates that it is useful in protecting a painted surface of a building or vehicle during a "mechanical processing operation" of an adjacent surface, including operations such as "painting, grinding, welding and etching" steps of a vehicle assembly operation, and "for masking selected portions of a vehicle from paint." See his column 1, lines 13-19 and 64-66. Thus, Woodhall's method involves masking/protection of specific isolated areas of a vehicle body at various stages of a manufacturing process involving mechanical processing operations where conventional masking materials (paper and tape) have previously been used, e.g., touch up of a damaged portion of a vehicle.

Further, applicant submits that it is highly relevant that Woodhall teaches a sequence that is the reverse of applicant's claimed method. Woodhall teaches first, applying a protective coating to selected areas of a surface to be painted, to mask those areas and prevent paint being

applied thereto, and subsequently applying (permanent) paint to the masked surface. While Woodhall also discusses masking surfaces during grinding operations and the like, as discussed above, the reference must be considered as a whole, and Woodhall's teaching of "mask, then paint" clearly teaches away from applicant's claimed method, and cannot be ignored.

In contrast to the teaching of Woodhall, during applicant's claimed method, according to the present invention, permanent paint is first applied to the exterior of vehicle components, and dried. Then, applicant's method teaches applying a protective coating (in liquid form) to the painted surfaces, in order to cover and protect the paint, and drying the protective coating in place over the paint. This is substantially the reverse of Woodhall's masking method, and is done for a completely different reason.

Applicant respectfully submits that the total teaching of Woodhall is very distinct from the claimed method involving coating the painted vehicle body with a protective coating during an assembly line manufacturing process for purposes of generally protecting same from accidental scratches or the like during manufacture, specifically during mounting of an engine and functional parts to the vehicle body during an assembly line manufacture of the automobile as recited in dependent claim 20, where an adjacent surface is *not being mechanically processed*, per se.

Though not expressly described in the specification of the present application, artisans would understand that the functional parts include auxiliary equipment of the engine, seats, seatbelt assemblies, meters, air conditioner, etc. As well known in the art, assembling operation of the engine and the functional parts is performed using electric and/or pneumatic power wrenches, screwdrivers, and other like fastening tools, but does not involve use of a painting

device, grinder, welder or etching machine as in Woodhall where conventional masking materials (paper and tape) have typically been used.

In this regard, applicant notes that several significant advantages result from the application of the strippable paint (protective coating) during the vehicle assembly prior to mounting of the engine and functional parts to the vehicle body, as discussed page 20, line 10 – page 26, line 12 of the original specification. For example, as discussed at pages 20, line 10 – page 22, line 2 of the specification, to any extent that conventional vehicle assembly procedures involve application of strippable paint (protective coating), this has been done in an inefficient manner after finished vehicle inspection. Conversely, by applying the strippable paint (protective coating) to the exterior paint finished surfaces of the vehicle body intermediate the normal assembly line procedures of paint finishing the vehicle body and assembling the engine and functional parts to the vehicle body (e.g., intermediate steps 43 and 44 in Fig. 8), the strippable paint (protective coating) is initially efficiently applied to substantially all the exterior paint finished surfaces of the vehicle body during the manufacturing process, and it remains thereon throughout the rest of the manufacturing process, efficiently protecting the paint finished surfaces throughout this time and permitting other conventional procedures to be eliminated (e.g., use of the reusable scratch covers during the assembly step). Other advantages of the claimed method are discussed below.

Applicant also respectfully submits that neither Woodhall nor Grogan discloses or suggests the specific application - use for his coating material as now defined in applicant's claims, i.e., wherein the automobile has a final inspection after it is fully manufactured and shipped after it is inspected, with the inspecting and shipping steps being carried out while the strippable paint (protective coating) *remains coated on the automobile body*, whereas such

application-use provides very significant cost savings, manufacturing efficiencies, and other advantages not previously achieved in the art.

Again, Woodhall's disclosed use of his masking material during fabrication of a vehicle on an assembly line is limited as discussed above. As will be understood, when Woodhall applies his masking material to protect "selected portions of a vehicle" from damage from a mechanical processing operation on an adjacent surface, the surface of the masking material will become contaminated, e.g., paint overspray will be applied thereto, ground metal particles will be applied thereto, ash from a welding, etching operation will be applied thereto, etc. As disclosed by Woodhall, such contaminated masking material is *removed* from the isolated areas of the vehicle surface to which they have been applied when the masking operation is completed, like the conventional masking materials (paper and tape) the strippable coatings replace. See column 4, lines 57-68 of Woodhall '978. Such removal is prior to the final inspection of the fully manufactured vehicle, just as with the conventional masking materials, because the isolated, contaminated areas of the masking material would interfere with conducting a proper final inspection, e.g., it would be impossible to properly inspect an underlying painted surface through the contaminated masking material, the isolated or non-continuous nature of the masking material on select portions of the vehicle's painted surfaces would unduly complicate an inspection, especially at the boundaries of each masked area, etc. Hence, Woodhall does not disclose or suggest the features of claims 20 and 45.

In this regard, applicant respectfully submits that the specific examples disclosed by Woodhall, including the discussion at his column 4, lines 57-68, are quite relevant to interpretation of what such reference conveys "as a whole" to the artisan, and it is clear that Woodhall's disclosure as a whole does not suggest, but teaches away from the claimed invention

wherein the protective coating (as applied during the manufacturing process) is applied over the dried permanent paint, and is maintained on the vehicle during subsequent final inspection, storage and shipping.

Applicant notes that the Courts and the BPAI have long held that “The ever present question in cases within the ambit of 35 U.S.C. 103 is whether the subject matter as a whole would have been obvious to one of ordinary skill in the art following the *teachings* of the prior art at the time the invention was made. It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art (emphasis added in the original).” In re Wesslau, 353 F.2d 238, 53 CCPA 746, 147 USPQ 391 (CCPA 1965).

Here, applicant respectfully submits that Woodhall expressly discloses his masking material as a substitute for conventional masking materials (paper and tape), to be used in the same way as the conventional materials in conventional masking operations. Certainly, conventional masking materials are not left on during final inspection, storage and shipping of the manufactured vehicle.

Quite differently, Grogan’s disclosure refers to coating of “*manufactured articles* such as automobiles” (emphasis added) and “a newly completed vehicle” to protect it from contamination and weathering that may occur while the manufactured vehicle is handled, stored and shipped. See Grogan’s disclosure at col. 1, lines 26–40 and col. 8, lines 15–17. Grogan does not disclose or suggest use of his strippable coating compositions to surfaces of an automobile during the manufacturing process thereof, and hence does not provide any motivation to further hypothetically modify the hypothetical combination of Woodhall and Omori so as to leave

Woodhall's strippable masking compositions on the vehicle through the remainder of an assembly operation and a finished vehicle inspection.

Applicant respectfully submits that (at most) the full, fair disclosures of the applied references might suggest to persons skilled in the art that after a vehicle is manufactured in a process involving Woodhall's masking material which is applied and removed during vehicle assembly, Grogan's coatings could be applied to the manufactured vehicle to protect painted finishes during handling, storage and shipment as specifically taught by Grogan. Such a method does not achieve or make obvious the highly advantageous method of claims 20 and 45.

Advantages of Applicant's Invention Defined in Claims 20, 45 and 49-57

Applicant respectfully the unobviousness of the claimed invention over all of the applied references, including Woodhall, Omori and Grogan, is strongly reflected by the several *significant advantages* attained by the invention of claims 20 and 45 over conventional practices, most of which advantages relate to the fact that the protective film is efficiently applied during the vehicle assembly process and can remain on the vehicle through final assembly, inspection, shipping and storage up to the point where the vehicle is delivered to the customer, which is never disclosed or suggested by any of the references. The advantages include those discussed in the application, and those discussed below:

a) Because the protective coating is applied during the vehicle assembly process, the application may be very efficiently performed on the vehicle assembly line, e.g., the coating composition is initially applied by nozzle onto paint finished surfaces and then manually spread with rollers and the like as the vehicle body moves along the assembly line. This is much more

efficient than application of, for example, the adhesive plastic films conventionally used to protect vehicles during shipment. Further, even in relation to application of a protective coating to a vehicle after it is manufactured and inspected, but before it is stored and shipped, such as disclosed by the Swidler and Grogan references of record, the claimed invention is much more efficient in terms of space and investments in equipment. See page 8, lines 16-22 of the specification.

b) By virtue of the peelable paint coating formed during the assembling process prior to mounting the engine and functional parts to the vehicle body, the paint-finished surface of the automobile is protected against damage during such assembly process (claim 20), during final inspection and shipping of the manufactured vehicle (claims 20 and 45), and afterwards up to the point where the finished vehicle is delivered to the ultimate customer.

c) The assembly process, especially the final assembly when the engine and functional parts are mounted to the vehicle body, is heavily involved in manual operations such that there is great chance for the paint finished surface to be scratched by contact with workers or tools, or to be otherwise contaminated by grease and other foreign matter from the workers' clothing, gloves, tools, etc. The peelable paint applied during the assembly process according to the invention protects the paint finished surface against all of these injuries.

d) During the final assembly process, heavy reusable protective covers are conventionally used to protect the paint finished surface from contact with the workers, tools and parts mounted to the vehicle. The use of the heavy reusable covers is very labor intensive (requiring manual application of the covers, manual removal covers and prompt transportation of the removed covers back to application stage for reuse), while the reusable covers themselves can cause scratches to the paint finished surfaces as they are fitted and removed. With the claimed

method of the invention, use of the reusable covers is significantly (but not entirely at the present time) reduced/replaced by the protective film, thus greatly reducing the expense of using the reusable covers, and the protective film of the invention functions better than the covers in preventing damage to the surfaces. See page 25, line 18 – page 2, line 12 of the specification.

f) Within the manufacturing plant, after the vehicle is fully assembled, it must be carefully inspected, measured, etc. for any flaws. This final inspection process creates a great amount of dust and other airborne contaminants which alight on the vehicle and may damage the paint finished surface. The protective paint film of the invention remains on the vehicle after assembly to protect the finish during the final inspection.

g) After the vehicle is manufactured and finally inspected, it is stored and shipped to a dealer or other destination. Conventionally, the vehicle's paint finished surfaces are protected from damage during storage and transportation (primarily) by adhesively applied, disposable plastic films as discussed above, and (to a much lesser extent) by a coating dissolvable with an alkaline aqueous solution, such as taught by Swidler and Grogan.

There are several problems or disadvantages associated with these conventional protections, e.g., typically the manufactured vehicles are stored outside of the manufacturing plant for some period before shipping so that the surface temperature must be adjusted (hotter or colder) for the adhesive films or dissolvable coating to be applied, for removal of the dissolvable coating dealers are required to have a large supply of alkaline solution in stock and to acquire expensive removal equipment, the adhesive films are typically black or white, which gives a bad appearance so that dealers tend to promptly remove same once the vehicles are received and subsequently wash the new vehicles when delivered to customers and such washing tends to cause small scratches which take away from the vehicles' appearance, the adhesive films are

labor intensive (and hence expensive) to use, the adhesive films must be disposed of when removed, the adhesive films must typically be trimmed to fit any particular surface, thus creating waste, etc.

The protective coating applied during the manufacturing process substantially avoids all of these problems and disadvantages, e.g., the protective coating is efficiently applied during the manufacturing process and remains on through shipping, the strippable coating is clear so that there is no incentive for the dealer to remove the film before the vehicle is delivered to the customer, there is little waste in application of the peelable film (99.4-99.6% efficiency), etc.

h) The cost involved for using the peelable protective films according to the invention is approximately ½ the cost of using the conventional adhesive plastic films.

Also, it should be noted that: the industry has largely rejected/replaced use of Woodhall's coatings with the adhesively applied plastic films for protecting the paint finished surfaces of manufactured vehicles during shipping / transportation; and the claimed invention is commercially successful as reflected by the Affidavit of Hisashi Kurota previously submitted.

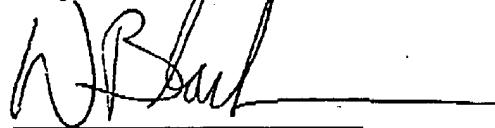
Conclusion

Based on the foregoing and the arguments presented in the Amendment of 12 Decmber 2003, applicant again respectfully submits that the rejections of the claims in this application are overcome, and it is respectfully requested that the rejections be reconsidered and withdrawn.

The Commissioner is hereby authorized to charge \$1,050.00, for nine new claims in excess of twenty (@50.00) and three new independent claim in excess of three (@200.00), as well as to charge any deficiency or credit any overpayment during the entire pendency of the present application, to Deposit Account 50-0744 in the name of Carrier, Blackman & Associates, P.C. A duplicate copy of this sheet is enclosed.

Favorable consideration is respectfully requested.

Respectfully submitted,



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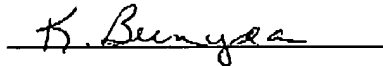
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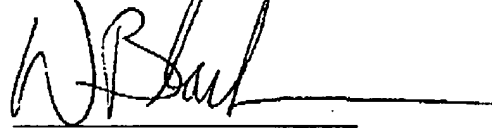


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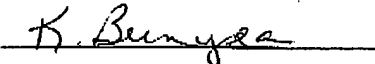
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